

GLOBAL PHARMA SUMMIT &

2nd International Conference on

GASTROENTEROLOGY AND HEPATOLOGY

November 23 - 24, 2018 | Bangkok, Thailand

Pawar Vinod S et al., Asian J Biomed Pharmaceut Sci 2018, Volume 8 | DOI: 10.4066/2249-622X-C5-014

EVALUATION OF ADAPTOGENIC ACTIVITY PROFILE OF *G. LUCIDUM* AND *P. SENEGA*

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The present investigation has been undertaken to evaluate adaptogenic and related properties of methanolic extracts of the *G. lucidum* and *P. senega* using various experimental animal models.

The graded doses of MEGL and MEPS were evaluated for adaptogenic activity using acute restraint stress (ARS) and chronic cold restraint stress (CCRS) in adult albino rats of 150-200g. *Withania somnifera* was used as reference standard.

In acute and chronic stress study, significant reversal of altered biochemical markers, organs weight and hematological parameters seen in treated groups. Oxidative injury in rat brain exposed to stress was significantly attenuated by the treatment of both test extracts at graded doses. Histological studies evident that pretreatment of MEGL and MEPS prevented congestion, ulceration, leucocytic infiltration, edema and necrosis in stomach. Test extracts significantly exhibited stress busting potential by reversing the altered brain levels of NA, DA and 5-HT. Also MEGL and MEPS at graded doses significantly reduced the number of writhes in chemical induced stress in mice.

It is concluded that *Ganoderma lucidum* and *Polygala senega* are strong adaptogens of natural origin, mitigating physical, chemical, acute and chronic stress induced alterations. These agents can be of therapeutic value for various stress related disorders viz. gastric ulcer, hyperglycemia, oxidation, depression etc. The observed adaptogenic effect might be due to prevention of desensitization of peripheral and central components of HPA axis and also due antioxidant activity.

BIOGRAPHY

Pawar Vinod S working as an Associate Professor in the Department of Pharmacology, SVPM's College of Pharmacy, Malegaon (Bk), Baramati, affiliated to Savitribai Phule Pune university, Pune, India. He has received PhD degree from Jawaharlal Nehru Technological University (JNTU), Hyderabad, India in the field of Pharmacology in 2014. He is having 13 years of teaching experience in Biotechnology, Pharmacology and Human Anatomy & Physiology. His area of research lies in the field of pre-clinical pharmacology, endocrinal pharmacology and ethnopharmacology. Dr Pawar Vinod S had worked on research projects funded by SPPU. He has several research publications/presentations to date in national and international journals/conferences of high profile. He had received "Gold Medal" Award for best research paper on "Adaptogenic (Antistress) Activity of Methanolic Extract of *Ganoderma lucidum* Against Physical and Hypoxic Stress in Mice" International conference on Advancement in Health Sciences, organized by Masterskill University College of Health Sciences, Port Dickson, Malaysia. He is appointed as nominee of CECSEA, Ministry of Environment, Forest & Climate Change, Govt of India. He is a life member of Association of Pharmaceutical Teachers of India (APTI) and Registered Pharmacist of Maharashtra State Pharmacy council (MSPC), India.

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